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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/780,256 | 02/17/2004 | Michael L. O'Banion | 0275Y-625COC | 3430 |

27572 7590 09/27/2005

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| EXAMINER |
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MITCHELL, KATHERINE W

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| ART UNIT | PAPER NUMBER |
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3677

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,256

Applicant(s)

O'BANION ET AL.

Examiner

Katherine W. Mitchell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 85-103 and 106-109 is/are pending in the application.
- 4a) Of the above claim(s) 99-103 and 106 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 85-98 and 106-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attach/Int(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

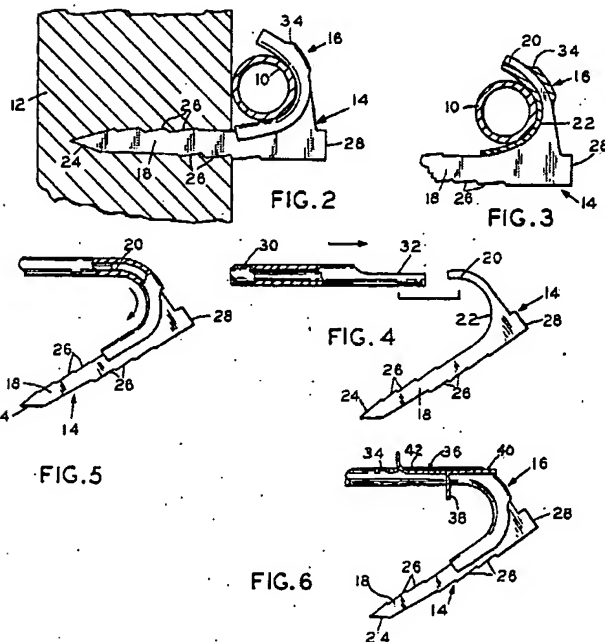
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 85-88, 91 and 95-98 and 107-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Lanz USP 4796848..

Re claim 85: Lanz teaches in Figs 2-6 and col 2 as cited below a nail capable of fastening framing members together comprising:



As shown particularly in FIG. 2, the hanger assembly includes a drivable, stud-like component indicated generally at 14, and a sheath component, indicated generally at 16.

The stud component 14 is designed to be driven into the wooden support. It includes a shank segment 18 and an integral hook segment 20.

The hook segment is adapted to receive the pipe. It merges with the shank segment through an inwardly facing throat segment 22, FIG. 4. All three segments are integral with each other and adapted for manufacture by a stamping operation.

Shank segment 18 is formed with a pointed end 24. This is shaped symmetrically to insure, that upon driving the stud into the timber, it will not cant to one side during the driving operation.

Shank segment 18 also is formed with reversely directed teeth 26, the teeth on one side being directed in a first direction and the teeth on the other side being directed in the other direction. This insures that the shank will not work out of the timber under changing temperature and moisture conditions.

Shank segment 18 is further provided with a head 28 which is used when driving the stud into the timber.

- a first end (24) configured to pierce metal framing members
- a second end (28) configured to receive a driving force

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- a single stem (18) extending longitudinally axially between first and second ends, having an interior surface (front side) and exterior surface (back side) separated by 1st and 2nd edges (thickness of metal stud)
- a 1st set of teeth 26 extending axially along a portion of first edge
- a 2nd set of teeth 26 on other side - extending axially along a portion of second edge (see also col 2 cited above).

Examiner notes that while the Figures show a "side" view of the fastener, examiner is considering the side shown (18) to be a front (or back). Inherently there is some thickness connecting 18 front to its back, which is considered to be the thickness forming edges at the longitudinal outer limits of 18.

Further Re claim 107-109: at least two teeth are on each edge, and each of these at least two teeth on each edge are at a unique axial position relative to 2nd end. Looking at Fig 2, each and every tooth on each edge has a leading edge at a unique axial position on the single stem.

Re claim 86: Fig 4 shows the lip (projecting past stem 18 at 20) which is capable of engaging a framing member

Re claim 87: Fig 2 shows each tooth having a radially extending surface substantially parallel to said lip (flat upper edge of tooth) (all substantially parallel to 20)

Re claim 88: Figs 2-6 show each tooth axially staggered relative to one another.

Re claim 91: The second end 28 is configured to be capable of being driven by an air nailer or ram-type device.

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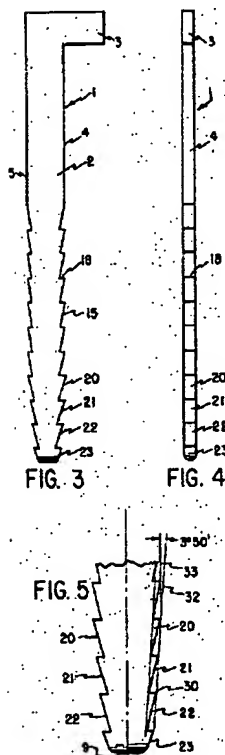
Re claim 95: Fig 2 shows the first end curved relative to the stem.

Re claim 96: First end 13 is a point in Fig 2.

Re claims 97-98: Fig 2 shows 1st and 2nd edges at as substantially parallel to each other. That same Figure 2 shows 1st and 2nd edges angled relative to one another (at the tip end) {Applicant has not specified exactly how the edges must be parallel. For example, / and \ are parallel in that their "top face" lies in the same plane – i.e, they are on the plate of the paper. However, their orientation relative to the longitudinal axis of the paper is not parallel.}

3. Claims 85-87, 89, 91, 92, and 95-98 and 107-109 are rejected under 35 U.S.C. 102(b) as being anticipated by Anstett USP 2649831 hereafter E Anstett.

Re claim 85: E Anstett teaches in Figs 1-5 and col 3 and 2 as cited below a nail capable of fastening framing members together comprising:



Figures 3 and 4 are views corresponding to Figures 1 and 2 and showing a modified construction. The nail of Figures 3 and 4 differs from that of Figures 1 and 2 only in that here the edges 4 and 5 are provided with barbs 15 along a portion of their length, and the edges 6 and 7 are provided with similar barbs. In one construction, in a nail of the size previously described, each barb was 0.018 inch deep at the shoulder 18, and the distance between adjacent barbs on the same edge 4 and 6 (or 5 and 7) of the nail was 0.070 inch. On the inclined sides 8 (or 7) there were three barbs 20, 21 and 22 all of the same height and depth and therefore of the same inclination of the sloping side. The lower edge 23 below the barb 22 was 3 of the height between other barbs and the edge 23 was inclined about 50% more than the inclination of the sides 20, 21 or 22. The edges 23 merge with the smooth curves 9-9 that constitute the bottom of the nail.

Figure 5 shows a further enlargement of the bottom of the nail of Figure 3. The tips 30 of the barbs 20, 21, 22 and 23 lie on an imaginary line 32 which is at an angle of 3° 5' with an imaginary line 33 which is an extension of the edge 4 of the nail.

When a nail such as shown in Figure 3 is driven into wood its action on the wood fibers ahead of the advancing tip of the nail is similar to that of the nail previously described. When the wood

head 3 at right angles to the shank. The shank is straight sided for almost its full length, the edges 4-5 being parallel to one another. Adjacent the bottom of the nail the edges 6-7 slope towards one another at a small angle, shown exaggerated in Figure 1. The edges 6 and 7 make an angle of 3° 50' with the edges 4 and 5, respectively, in one preferred construction. In that construction the entire nail was 1.2 inches long, the shank was 0.11 inch wide, and the tapered edge extended 0.266 inch upwardly from the bottom of the nail. The bottom 8 of the nail is rounded along a curve 9, which curve merges with the edges 6-7 as may be seen in Figure 1, and is substantially tangent to the flat sides 10-10, as may be seen in Figure 2.

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- a first end (9) configured to pierce metal framing members
- a second end (at 3) configured to receive a driving force
- a single stem (2) extending longitudinally axially between first and second ends, having an interior surface (front side) and exterior surface (back side) separated by 1st and 2nd edges (thickness of metal stud)
- a 1st set of teeth (barbs 15) extending axially along a portion of first edge
- a 2nd set of teeth (15) on other side - extending axially along a portion of second edge (see also col 3 cited above).

Further Re claim 107-109: **at least two** teeth are on each edge, and each of these at least two teeth on each edge are at a unique axial position relative to 2nd end. Looking at Fig 2, each tooth on each edge has a leading edge at a unique axial position on the single stem – the claim is not worded to require that each tooth on both edges be at a unique axial position, and each tooth on the right edge is at a unique axial position on the single stem and each tooth on the left edge is at a unique axial position on the single stem.

Re claim 86: Fig 3 shows the lip (projecting past stem at 3) which is capable of engaging a framing member

Re claim 87: Fig 2 shows each tooth having a radially extending surface substantially parallel to said lip (flat upper edge of tooth) (all substantially parallel to 3).

Re claim 89: Figs 3 and 5 best show the lower portion of the stem reducing in cross section as the stem extends toward the first end. The tip is considered the endmost portion at 23, and everything above is the shank.

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Re claim 91: The second end 9 is configured to be capable of being driven by an air nailer or ram-type device.

Re 92: The 1st and 2nd end and stem can allow nesting.

Re claim 95: Fig 5 shows the first end 23 curved relative to the stem.

Re claim 96: First end 9 is a point in Fig 5, albeit not a sharp point.

point (point) *noun*

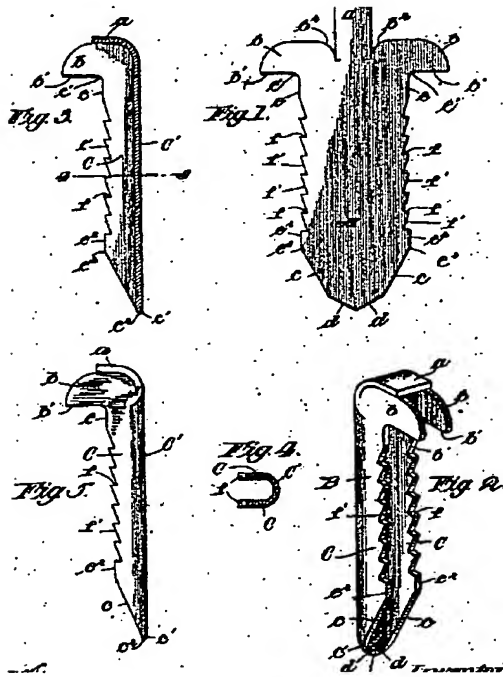
1. A sharp or tapered end:¹

Re claims 97-98: Fig 3 shows 1st and 2nd edges at as substantially parallel to each other. That same Figure 3 shows 1st and 2nd edges angled relative to one another (at the tip end—see also specification above). {Applicant has not specified exactly how the edges must be parallel. For example, / and \ are parallel in that their “top face” lies in the same plane – i.e, they are on the plane of the paper. However, their orientation relative to the longitudinal axis of the paper is not parallel.}

4. Claims 85-87,89-98 and 107-109 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Duffy USP 727111.

Duffy teaches a fastener with first (piercing - d) and second (driving- a) ends and a single longitudinal shaft, said shaft with interior and exterior surfaces (A and B respectively) with first teeth(f and f' meet to form leading edge of each tooth) on a first edge and second teeth on a second edge.

¹Excerpted from *The American Heritage Dictionary of the English Language, Third Edition* Copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from Lernout & Hauspie Speech

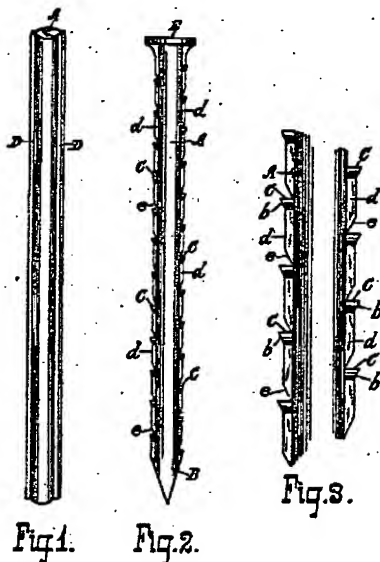


the lip is b' , and f is the radially extending surface parallel to said lip. Stem section (with teeth) is straight with parallel edges, and section at c tapers to tip at d and c^2 . The stem has a "C" shaped cross section as described. Due to the curve and relative thinness of the edges, they are inherently somewhat resilient and will inherently flex toward one another when penetrating framing members. The interior is concave and exterior is convex. They can be driven. The first end is shown curved in Fig 2, and it tapers per Fig 1-3. Looking at Fig 2, they can be at least vertically nested. The edges are substantially parallel (fig 1 and 2) to each other, and taper angled toward one another (Fig 1 and 2 toward point c^2). **At least two** teeth are on each edge, and each of these at least two teeth on each edge are at a unique axial position relative to 2nd end.

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Looking at Fig 2, each tooth on each edge has a leading edge at a unique axial position on the single stem -- the claim is not worded to require that each tooth on both edges be at a unique axial position, and each tooth on the right edge is at a unique axial position on the single stem and each tooth on the left edge is at a unique axial position on the single stem.

5. Claims 85-91 and 96-97 and 107-109 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by White USP 549555.

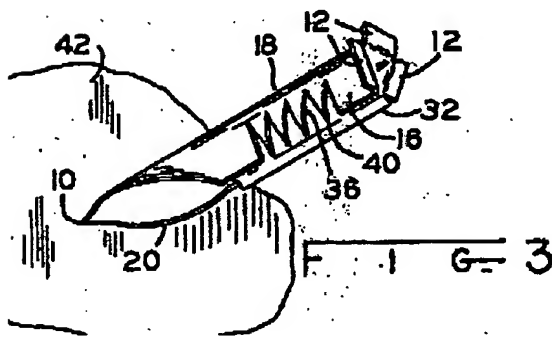


White teaches the nail with 1st (E) and 2nd (B) ends and a single stem with interior surface (one side A would be interior and one side A would be exterior, separated by edges D), and all teeth on both edges are all axially staggered relative to one another. The 2nd end has a radially projecting lip (fig 2 at E) and Fig 3 shows the teeth with radially extending surfaces parallel to said lip. The cross section tapers (upper section vs lower section near B- the tip is considered only the very end point). Looking at Fig 1, a cross section would have a substantially C-shaped cross section (O

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is considered substantially C as a cross section). They can be driven. The first end is a point, and 1st and second edges are parallel.

6. Claims 85-86, 89-91 and 94-98 and 107-109 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Newport USP 4354782.



An expansion fastener of this invention includes an elongated body of resilient sheet metal pointed on one end and having at least one lateral flange on the other. The body intermediate its ends is provided with a shank portion which is generally triangular in cross-section. The shank portion has two longitudinally extending, generally planar, spaced, juxtaposed sides integrally joined by a longitudinally extending bridging portion. The sides have longitudinal edges opposite from the bridging portion, which are adjacent and spreadable. Longitudinally spaced teeth are provided on said sides, which extend outwardly and are formed of the sheet metal itself. The teeth have exposed edges transversely of the shank portion, and the sides further are provided with thread-engaging edges opposite the teeth, respectively. The pointed end portion of the body is truncated and generally circular in cross-section. The teeth lie radially within an imaginary cylindrical extension of the circular end portion, whereby driving the body into wallboard forms a hole therein conforming to the shape of the pointed end portion which clears the teeth. A longitudinally flared rib may be provided on one exposed edge of a side for engagement with the opening in the wallboard thereby to resist turning movement of the fastener in the formed hole.

Newport teaches in Fig 3 the nail with 1st (10) and 2nd (12) ends and a single stem with interior surface (concave interior and one side convex exterior, separated by edges 30, 32, see col 1 lines 28-48 and col 3 lines 9-49 -- teeth on said surfaces inherently means teeth on edge not shown), and teeth on an edge are axially staggered relative to one another. The 2nd end has a radially projecting lip (fig 12- Fig 3). The cross section tapers (upper section vs lower section - the tip is considered only the very end point). Looking at Fig 3, a cross section would have a substantially C-shaped cross section. They can be driven. The first end is a point, and 1st and second edges are parallel (upper portion) and are angled wrt each other (lower portion 20 - tip is very end at 10). At least two teeth are on each edge, and each of these at least two teeth on

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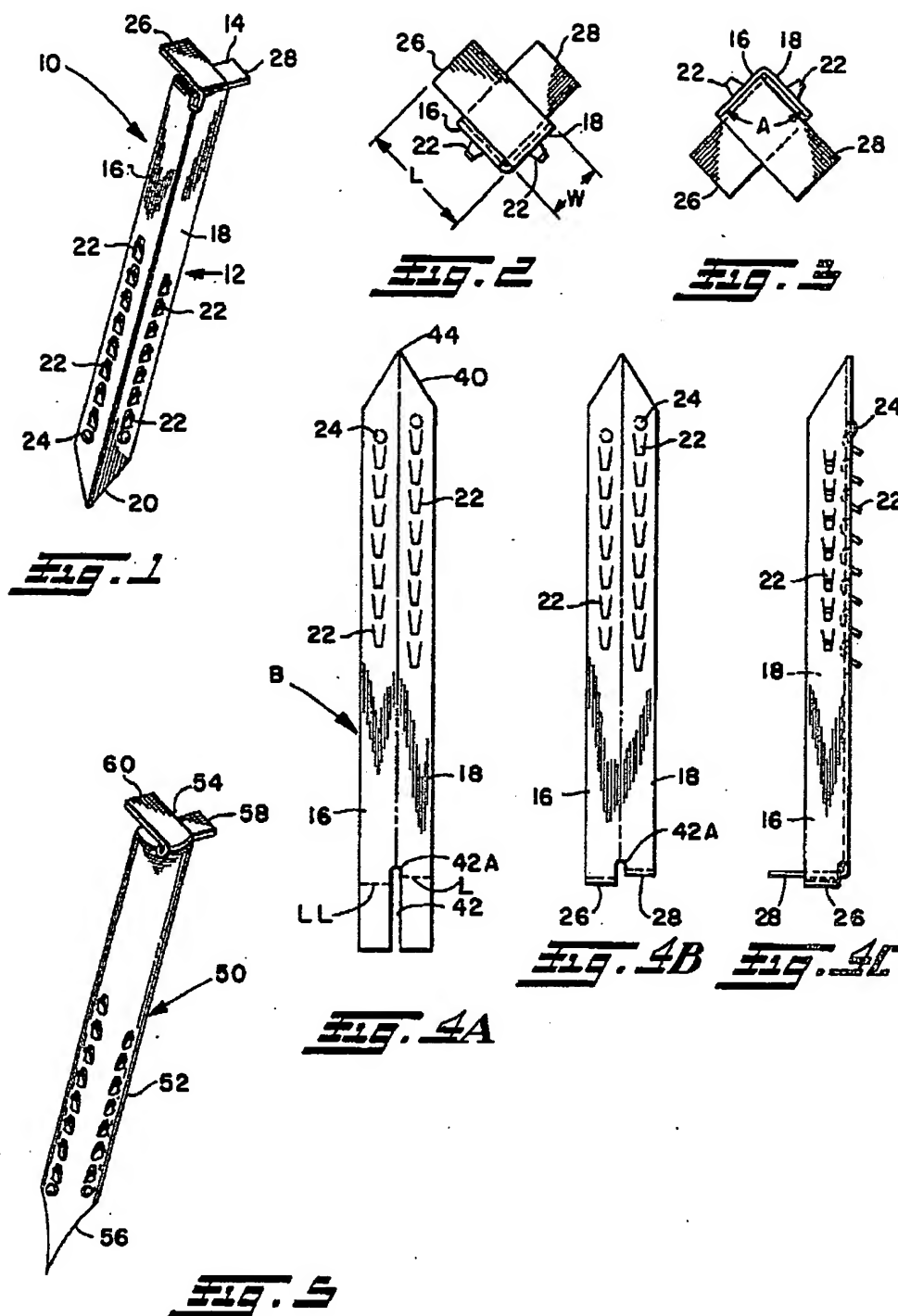
each edge are at a unique axial position relative to 2nd end. Looking at Fig 3, each tooth on each edge has a leading edge at a unique axial position on the single stem – the claim is not worded to require that each tooth on both edges be at a unique axial position, and each tooth on the right edge is at a unique axial position on the single stem and each tooth on the left edge is at a unique axial position on the single stem.


Although only one edge is shown, note col 1 lines 28-48 and col 3 lines 9-49.

7. Claims 85–98 and 107-109 are rejected under 35 U.S.C. 103(a) as being obvious over Paskert et al USP 4167885 in view of White USP 549555.

Paskert teaches a fastener with first (piercing - 44) and second (driving- 26) ends and a single longitudinal shaft, said shaft with interior and exterior surfaces (see Figures) with first teeth (22) and second teeth, but they are not at the respective edges.. White teaches first and second teeth at the edges, and notes they are advantageous to provide maximum strength, as it is well-known that an uninterrupted surface has much greater strength than one with multiple interruptions. Therefore, it would have been obvious to one of ordinary skill in the art, having the teachings of Paskert and White before him at the time the invention was made, to modify Paskert as taught by White to include barbs or teeth at the edges, in order to obtain larger uninterrupted planar surfaces as the body of the nail. One would have been motivated to make such a combination because this would provide a stronger nail less likely to bend or fail when driven.

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(All following references to Paskert): The lip is 26 or 28, and  (Detail of Fig 2) is the radially extending surface parallel to said lip. Stem section (with teeth) is

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straight with parallel edges, and section at 40 or 56 tapers to tip at 44. The stem has a "C" shaped cross section as described - see Fig 5. Due to the curve and relative thinness of the edges, they are inherently somewhat resilient and will inherently flex toward one another when penetrating framing members. The interior is concave and exterior is convex. They can be driven. The first end is shown curved in Fig 5, and it tapers per Fig 1 and 4A-5. Looking at Fig 5, they can be nested. The edges are substantially parallel to each other, and taper angled toward one another (Fig 1 and 5 toward point 44). **At least two** teeth are on each edge, and each of these at least two teeth on each edge are at a unique axial position relative to 2nd end. Looking at Fig 1, each tooth on each edge has a leading edge at a unique axial position on the single stem -- the claim is not worded to require that each tooth on both edges be at a unique axial position, and each tooth on the right edge is at a unique axial position on the single stem and each tooth on the left edge is at a unique axial position on the single stem.

8. Claims 85--87, 89-94, 96-98 and 107-109 are rejected under 35 U.S.C. 102(b) as being obvious over Lombard USP 2110959.

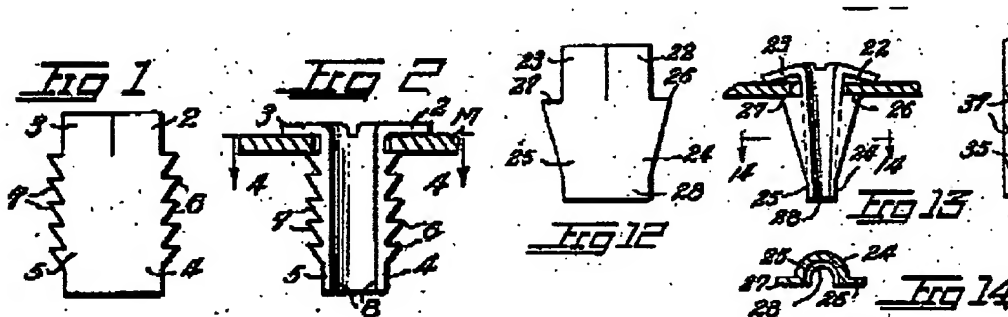
Re claim 85: Lombard teaches in Figs. 1-2 and Figs 12-14 and page 2 col 2 line

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66 – page 3 col 1 line 64, and col 4 lines 1-25 cited below a nail capable of fastening

shank sections 24, 25 may be tapered toward the pilot 28 or the entering end of the device in a substantially truncated cone configuration; the use of a pilot 28, Fig. 13 is designed to facilitate insertion of the device into the work aperture. The outer longitudinal edges of the sections carrying the shoulders 26, 27 are also tapered toward the entering end of the device to facilitate easy application thereof to the work aperture and also to cause gradual relative contraction of the shank sections 24, 25 as the device is advanced in locking position in the work. It is to be understood that yieldable head sections such as 22, 23 may be employed in any form of shank construction of the devices herein disclosed where it is desired that an axial pull be exerted on the shank by the head member of this device to obtain a snug engagement of the shank elements in fastening position in the work as shown in Fig. 13. It is also to be understood as within the scope of this invention that in any of the shank structures herein disclosed a pilot be employed and that the respective shank sections be suitably tapered toward such pilot or the entering end to facilitate application of the device to the work.

framing members together comprising:



- a first end (at 8) configured to pierce metal framing members – examiner notes a metal fastener with a taper as in Fig 13 would inherently pierce at least some metal members, such as aluminum in the thickness of a soda can body or foil, which could be framing members in toys or the foil surface of insulation framing members. Examiner personally made a “teepee” structure of soda/beer cans as a child, and a soda can could be considered the cylindrical framing structure to contain soda; or a tin foil packet containing leftovers, thus cans or foil can be considered framing members)

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- a second end (2,3) configured to receive a driving force
- a single stem (4,5) extending between first and second ends, having an interior surface (concave interior –shown in Fig 3-4 of patent) and exterior surface (convex exterior shown in Fig 3-4 of patent) separated by 1st and 2nd edges (thickness of metal in Figs 2)
- a 1st set of teeth 6 extending axially along a portion of first edge
- a 2nd set of teeth 7 extending axially along a portion of second edge (see also col 2 lines 29-65)

Re claim 86: Fig 2 shows the lip (projecting past stem) which is capable of engaging a framing member

Re claim 87: Fig 1 shows each tooth having a radially extending surface substantially parallel to said lip (flat upper edge of tooth)

Re claim 89: Figs 12-14 and page 3 col 2 line 54 – page 4 col 1 line 25 (taper) show the lower portion of the stem reducing in cross section as the stem extends toward the first end. Note – examiner is defining cross section as viewed “cut” by examiner’s dotted line in Fig 3 and 4. Note that Lombard is explicit that any embodiment can taper.

Re claim 90: Fig 3,4, and 14 show the stem substantially “C” shaped.

Re claim 91: The second end 2,3 is configured to be capable of being driven by an air nailer or ram-type device.

Re claim 92: The embodiment taught in Figs 12-14 has the 1st and 2nd ends and stems configured to allow nesting.

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Re claim 93: the edges are inherently resilient and would flex due to their thinness and structure -see col copied 4 above.

Re claim 94: The interior is concave, and the exterior is convex per Figures 3,4, and 14, but they are just the two faces of a formed sheet of metal. As best understood, every planar surface that has been curved would have one face considered convex and one face considered concave, depending on orientation.

Re claim 96: A point merely requires a taper, thus the 1st end is a point.

Re claims 97-98: Fig 14 shows 1st and 2nd edges at as substantially parallel to each other. Fig 11 shows 1st and 2nd edges angled relative to one another. Examiner is considering the edges to be the face "thickness" of the plate forming the fastener.

Further Re claim 107-109: **at least two** teeth are on each edge, and each of these at least two teeth on each edge are at a unique axial position relative to 2nd end. Looking at Fig 2, each tooth on each edge has a leading edge at a unique axial position on the single stem -- the claim is not worded to require that each tooth on both edges be at a unique axial position, and each tooth on the right edge is at a unique axial position on the single stem and each tooth on the left edge is at a unique axial position on the single stem.

Response to Arguments

9. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant's arguments filed with respect to Lombard have been fully considered but they are not persuasive. Metal framing members does not positively require great

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strength or a pointed tip. The metal foil coating on Foamboard can be considered a metal framing member, and a metal fastener with a taper as in Fig 13 would inherently pierce at least some metal members, such as aluminum in the thickness of a soda can body or foil, which could be framing members in toys or the foil surface of insulation framing members. Examiner personally made a "teepee" structure of soda/beer cans as a child, and a soda can could be considered the cylindrical framing structure to contain soda; or a tin foil packet containing leftovers, thus cans or foil can be considered framing members)

11. Examiner notes the large number of rejections, but found significant new art. Applicant requested an opportunity to respond to all art, and the multiple citations will give applicant an opportunity to fully consider all art prior to any response to better allow any amended claims to read over all known art.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 571-272-7069. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Katherine W Mitchell
Examiner
Art Unit 3677

A handwritten signature in cursive script, appearing to read 'Katherine W Mitchell', written in black ink.

Kwm
9/21/2005

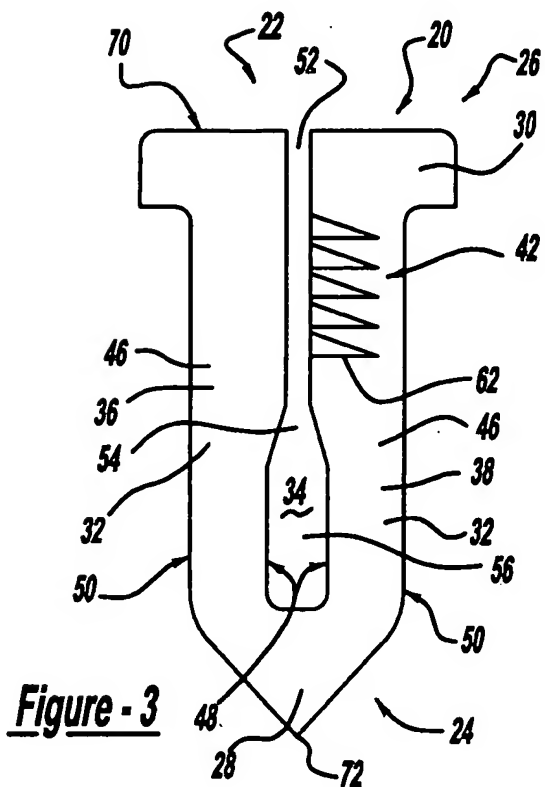


Figure - 3

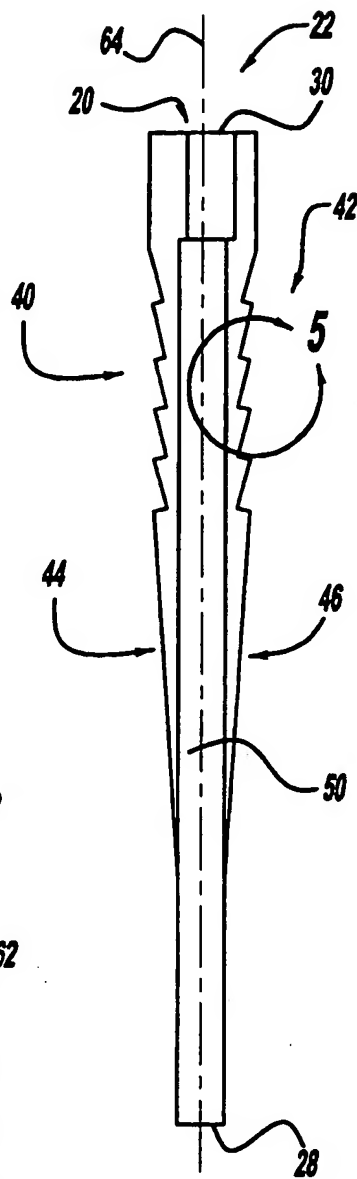


Figure - 4

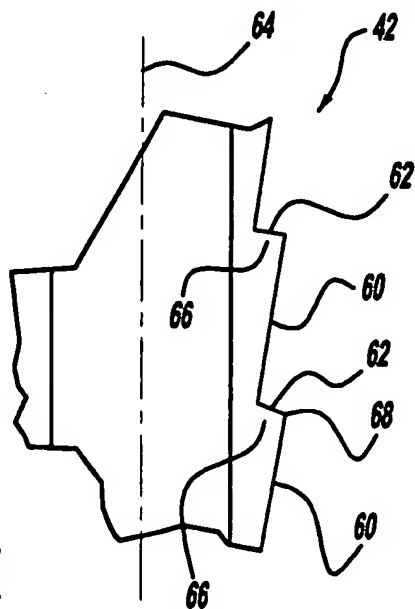


Figure - 5

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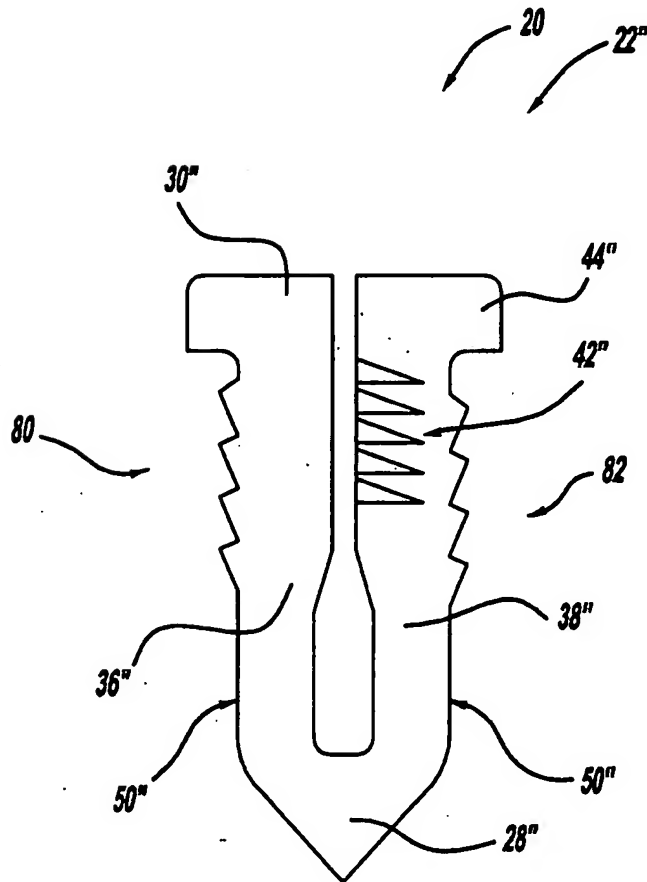


Figure - 11